

Application No. 10/534,956
Paper Dated: May 26, 2009
In Reply to USPTO Correspondence of November 26, 2008
Attorney Docket No. 5219-091016

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0028] at pages 4 and 5 of the specification with the following:

--Generally, the MEMS structure 110 is packaged to ensure protection of the device from the working environment and protection of the environment from device material and operation. For example, one level of protection provides protection from interference from other mechanical structure or objects to ensure structural integrity of the MEMS structure 110. In this type of enclosure, the barrier layer 120 should be made of a material that can withstand the general rigors of a particular operating environment of a MEMS device. Another additional level of protection may further provide protection from exposure to oxygen or water (*e.g.*, a hermetic enclosure). Accordingly, for this type of protection, the barrier layer 120 is generally made of a metal material that provides an airtight seal around the air cavity 108. In addition, some barrier levels 120 may also provide an additional level of protection which further provides protection from exposure to any outside gases. For this last level of protection, a vacuum is produced inside the air cavity 108 and the barrier layer ~~20~~ 120 is generally made of a metal material that maintains the vacuum inside the air cavity 108.--

Please replace paragraph [0052] at page 11 of the specification with the following:

--In this approach, thermally decomposable sacrificial material 610 (which does not have to be photo-definable) is applied (620) via a syringe dispensing tool (*e.g.*, manually or automatically) with adjustable droplet size (*e.g.*, 1 mm to 1 cm) to cover the air cavity 612. The sacrificial material 610 is then overcoated (630) using Avatrex overcoat material, and the process sequence continues similar to the PVP process, including a thermal release step (640) for decomposing the sacrificial layer 610 and a metallization step (650) for adding a metal barrier layer 617 over the air cavity-~~616~~ 612. The final metallization step (650) enables a hermetically sealed package 618.--

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Please replace paragraph [0053] at page 11 of the specification with the following:

--The aforementioned processes are examples of techniques for applying a sacrificial material 405_325 and/or barrier materials 120 (*e.g.*, overcoat materials, metal layers, other protective barriers, *etc.*) to MEMS devices. However, the present disclosure is not limited to the processes discussed with regard to FIGs. 4-7. For example, other lithography and etching techniques used in semiconductor fabrication processes may be used. As such, a MEMS device could also be packaged using a masked etching process on a thick sacrificial material which is aptly suited for packing small MEMS devices (*e.g.*, HARPSS resonator, RF switch) with fragile elements or wide and deep holes (*e.g.*, $t>L>50 \mu\text{m}$, where t represents the thickness of a sacrificial layer 810 and L is measures the length of an air cavity 820), as represented by FIG. 8. As such, an oxygen mask may be used to remove sacrificial material from undesired areas with an oxygen plasma.--